

CLAIMS

What is claimed is:

1. A Turbine Generator Vibration Damper System comprising:
a pair of bearing fulcrum load wings mounted to a location on a bearing
5 housing of a turbine-generator set that is susceptible to vibration.
2. The Turbine Generator Vibration Damper System of Claim 1, wherein
each said bearing fulcrum load wings is changeable in length, wherein changes
in length result in tunability of vibration dampening capability.
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3. The Turbine Generator Vibration Damper System of Claim 1, wherein
each said bearing fulcrum load wings is changeable in width, wherein changes in
width result in tunability of vibration dampening capability.
- 15 4. The Turbine Generator Vibration Damper System of Claim 1, wherein
each said bearing fulcrum load wings is changeable in weight, wherein changes
in weight of said system results in tunability of vibration dampening capability.
- 20 5. The Turbine Generator Vibration Damper System of Claim 1, wherein
each said bearing fulcrum load wings is foldable, wherein folding said wing
results in tunability of vibration dampening capability.

6. The Turbine Generator Vibration Damper System of Claim 1, wherein
said pair of bearing fulcrum load wings are positioned at an angle relative
to a lateral horizontal line of said bearing housing, said angle being
changeable, and wherein said change of angle results in tunability of
vibration dampening capability.

7. The Turbine Generator Vibration Damper System of Claim 1, wherein
each said bearing fulcrum load wing further comprises a plurality of
multiple wing elements capable functioning integrally as a tunable bearing
fulcrum load wing.

8. The Turbine Generator Vibration Damper System of Claim 1, wherein said
bearing fulcrum load wings further comprises:

a load element, said load element formed as a rigid body;

a wing;

a fixture unit for fixing said wing to said load element in a movable
fashion; and

attachment means for fixing said load to said bearing housing.

9. The Turbine Generator Vibration Damper System of Claim 6, further
comprising connecting means for firmly joining together at least two said

load elements.

10. The Turbine Generator Vibration Damper System of Claim 9, further
comprising control means for manipulating said attachment means in a manner
5 to move said load element such as to actively tune said system to prevent
vibration.

11. The Turbine Generator Vibration Damper System of Claim 10, wherein
said control means for manipulating said attachment means in a manner to move
10 said load element such as to actively tune said system to prevent vibration is
selected from the group comprising:

computer electronic control, mechanical control, electro-mechanical
control; hydraulic control; electro-hydraulic control; and manual control.

12. The Turbine Generator Vibration Damper System of Claim 9, further
15 comprising connecting means for firmly joining at least two said load elements.

13. A method for dampening vibration in a Turbine Generator set, said
method comprising the steps:

20 affixing a pair of bearing fulcrum load wings to a location on a bearing
housing of a turbine-generator set that is susceptible to vibration; and

tuning the characteristics of said bearing fulcrum load wings in a manner that results in tunability of vibration dampening capability.

14. The method of Claim 13, wherein the characteristic of said bearing
5 fulcrum load wing that is tuned is the length of said bearing fulcrum load wing

15. The method of Claim 13, wherein the characteristic of said bearing fulcrum load wing that is tuned is selected from the group comprising:

the width of said bearing fulcrum load wing; the position of said bearing
10 fulcrum load wing; the weight of said bearing fulcrum load wing and ; and the relative angle between said bearing fulcrum load wings and a lateral horizontal line of said bearing housing.

16. The method of Claim 13, further comprising the step of actively tuning the
15 characteristics of said bearing fulcrum load wings utilizing a computer control means for adjusting said characteristic.

17. The method of Claim 13, further comprising the step of actively tuning the characteristics of said bearing fulcrum load wings utilizing means for adjusting
20 said characteristic selected from the group comprising:

computer electronic control, mechanical control, electro-mechanical

control; hydraulic control; electro-hydraulic control; and manual control.

18. In a turbine generator set having a bearing housing, the improvement comprising forming at least one bearing fulcrum load wing within said bearing housing at a location on said bearing housing that is susceptible to vibration.

19. In the turbine generator set of Claim 18, wherein wherein the characteristics of each said bearing fulcrum load wings is changeable, wherein changes in said characteristics result in tunability of vibration dampening capability.

20. In the turbine generator set of Claim 19, wherein said characteristics are selected from the group comprising: length, width, weight, shape, position, and relative angle between said bearing fulcrum load wings and a lateral horizontal line of said bearing housing.

21. In the turbine generator set of Claim 18, the improvement further comprising control means for manipulating an attachment means in a manner to move said load element such as to actively tune said system to prevent vibration.